

OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2008
OAK RIDGE, TENNESSEE 37831

April 19, 1991

Mr. Craig Cowdery
EG&G Rocky Flats, Inc.
Rocky Flats Plant
Post Office Box 464
Building T130B
Golden, Colorado 80402-0464

Dear Craig:

The following are my comments on the PSI Project Plan for Bench-Scale Tests that I received on April 18, 1991. I am also sending copies of these comments to Tom Olsen of Department of Energy Rocky Flats Area Office (DOE-RFO) and Randy Harris of Hazardous Waste Remedial Actions Program (HAZWRAP) in Oak Ridge.

1. Bench-Scale Perox-Pure Equipment

- * The water level in the feed reservoir must be maintained so that there is zero headspace. The liquid entering the reservoir will agitate the inventory in the reservoir, and thus promote volatilization of the volatile organic compounds (VOC). This could give abnormally high destruction efficiencies. Perhaps a floating Styrofoam cover could be used in the reservoir. If this is not possible, then air samples from the headspace in the reservoir should be analyzed to determine VOC loss.
- * Request that the accuracy of the metering pump be checked before any tests are conducted. Check the last date the rotameter and the UV intensity measuring devices were calibrated.

2. Analytical Screening

- * How much time delay will there be between the withdrawal of the analytical screening samples and starting of actual tests? Are we talking about hours or days? If the delay is going to be more than three days, the water used for the treatability study may not be representative of the actual groundwater.

3. Pretreatment

- * I would prefer filtering the water through the three micron filter rather than gravity settling. The settling procedure may result in VOC loss through volatilization.

ADMIN RECORD

4. Testing Protocol

- * How is time zero defined? I would prefer this to be the sample taken after the system is charged with liquid and the liquid recirculated for one or two minutes but before the peroxide is added and the UV light is turned on.
- * If possible, the samples should be taken in triplicates for statistical analysis. Since only VOC need to analyzed for these tests, this should not result in much additional work.
- * How will the accuracy of samples analysis at PSI be determined? Will EG&G submit standard samples as a check?
- * Will the samples for the optimized tests be taken at only one residence time since two gallons of water will be removed?

5. Testing Report

- * Request that raw data be included with the test report.

If you have any questions on these comments, please feel free to contact me. Also, let me know as soon as possible when the schedule for these tests is finalized so that I can make my travel arrangement.

Sincerely,



S. P. Singh
Robotics & Process Systems Division

SPS:jda

cc: R. Harris, HAZWRAP
R. T. Jubin
S. A. Meacham
T. T. Olsen, DOE-RFO
K. E. Plummer